

Delaware Nutrient Management
Program

DELAWARE CONSERVATION
PRACTICE STANDARD

**PRE SIDE-DRESS SOIL NITRATE
TEST (PSNT)**

(Reported by No.)

DEFINITION

The Pre-Sidedress Soil Nitrate Test is a late spring soil test that helps producers determine the amount of nitrate in the soil to aid in nitrogen management decisions.

PURPOSES

This practice may be applied for one or more of the following purposes:

1. Aid in more accurate nitrogen management decisions.
2. Reduce nitrogen losses from crop fields.
3. Increase nutrient efficiency.
4. Protect water quality.
5. Increase crop yield.

**CONDITIONS WHERE PRACTICE
APPLIES**

This practice applies where:

1. Fields have high levels of organic matter.
2. Fields have received manure.
3. Corn production is following a legume crop.

4. Corn measures 10-12 inches tall from the ground surface to center of the whorl.

CONSIDERATIONS

The pre side-dress soil nitrate test (PSNT) is only recommended for use on crops to which manure/litter has been applied. This is an early-season assessment of nitrogen availability.

CRITERIA

Materials. A composite should be made of 12-15 soil cores collected at a depth of 12 inches from each sample area (the center of planting rows). Soil cores should be mixed thoroughly in a bucket before the subsample is taken for analysis. The large number of cores is important due to non-uniformity of manure application.

Immediately after samples are taken, they should be air dried on a thin layer of non-absorbent paper.

REFERENCES

1. The University of Delaware recommendations for using the PSNT are available at:
http://ag.udel.edu/other_websites/DSTP/forms/Croppers/soiltestnotes/stn14.pdf